



Original Article

The Old and the Oldest-old: Do They Have Different Perspectives on Adjustment to Aging?[☆]Sofia von Humboldt^{*}, Isabel Leal

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SUMMARY

Background: Older adults experience varying challenges in old age. This study aims to explore the indicators of adjustment to aging (AtA) and to examine the potential explanatory mechanisms of a correlational model for AtA for the old and oldest-old adults.

Methods: This qualitative study comprised demographics and semistructured interviews. Complete information on 152 older adults aged between 75 years and 102 years (mean = 83.76 years; standard deviation = 6.458). Data was subjected to content analysis. The correlational model of indicators of AtA was analyzed using a multiple correspondence analysis.

Results: “Occupation and achievement” was the most mentioned indicator of AtA by the old participants (17.7%), whereas “existential meaning and spirituality” was the most verbalized indicator of AtA for the oldest-old participants (16.9%). AtA was explained by a three-factor model for each age group. For the old participants, the largest factor “occupational and social focus” accounted for 33.6% of total variance, whereas for the oldest-old participants, “spirituality and health focus” represented 33.5% of total variance.

Conclusion: The outcomes presented in this paper stressed the varied perspectives concerning AtA, contoured in two different models, and the need of considering these when designing and implementing programs in health care for the old and the oldest-old.

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1. Introduction

Globally, the older population is growing at a rate of 2.6% per year, considerably faster than the population as a whole (1.2% annually). Currently, older people survive to even more advanced ages. The oldest-old (85+ years) constitute 7% of the world's 65 years-and-over population. Additionally, it is projected an increase of 151% between 2005 and 2030 for the oldest-old population and a 104% increase for the old population aged between 65 years and 85 years¹.

It is generally accepted that as a person ages, the experiences acquired over the life time, socioeconomic resources, relationships, and support systems may profoundly impact longevity and well-

being². Furthermore, as older adults attain later life, they are more likely to be challenged with physical, mental, and social changes that require adjustment³. In particular, the oldest-old are increasingly vulnerable to declines in their functional capacities, resulting in a loss of autonomy⁴.

Considering the varying challenges that occur from late adulthood to extreme old age and the high adaptive potential over the whole life course, aging was defined as an ongoing process which requires continuous adjustment⁵. Indeed, adjustment to aging (AtA) is reached by balancing one's own experience, self-standards, personal aims, core motivations and values, with external influences⁶. Moreover, AtA is different from other well-being concepts previously validated in the literature^{7,8}.

To date, insufficient attention has been paid to investigating AtA in older adults with age differences in the literature. Yet, given the diversity of aging experiences among the old and the oldest-old, the deepening of their perspectives by using qualitative research may provide an effective approach in differentiating AtA in both age groups⁹. Hence, how old and very old individuals perceive AtA was the central focus of this research. In detail, this is a qualitative study

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designed to: (1) explore the conceptualization of AtA for the old and the oldest-old; and (2) examine the potential explanatory mechanisms of two correlational models for AtA for these age groups.

2. Materials and methods

2.1. Participants

One hundred and fifty-two, community-dwelling older adults were recruited from lifelong learning centers' message boards, local and art community centres list-serves in Lisbon and the Algarve regions in Portugal. Sampling was performed purposefully.

For the purpose of this study, old participants were aged between 75 years and 84 years and the oldest-old participants were aged ≥ 85 years. Furthermore, the professional status comprised all the professional development activities reported by the participants. Participants' target group were aged ≥ 75 years (mean = 83.76 years; standard deviation = 6.458; range, 75–102 years). The old participants were 59.2% women, 64.5% married, and 72.3% living with their family. The totality of old participants were able to perform activities of daily living, as well as instrumental activities of daily living. The oldest-old participants were 63.2% women, 59.2% married, and 82.1% living with their family. The totality of oldest-old participants were able to perform activities of daily living and 96.3% of these participants were able to perform instrumental activities of daily living. Participant eligibility criteria were the following: (1) an absence of concurrent severe mental disorders according to the Diagnostic and Statistical Manual of Mental Disorders-IV; and (2) scoring in the normal range on the Mini-Mental Status Exam (>26)¹⁰. Table 1 shows the characteristics of the study's participants.

2.2. Data collection

The participants were provided with a brief description of the study over the phone or in person, and were invited to participate in a person-to-person interview. All the participants gave their informed consent after the presentation of the study. Each semi-structured interview was performed individually in the participant's own home and began with a set of straightforward background questions to find out about the informant's living arrangements, health, age, family, education, and work, followed by one open-ended question: "I would like to understand what, in your point of view, contributes to your adjustment to aging in this phase of your life". During the interviews, the researcher assumed a neutral position in order to avoid bias in the investigation¹¹. Neutrality was kept by ensuring that the findings were a function solely of the participants and conditions of the research, with no researchers' interpretation. The interviews lasted between 15 minutes 35 minutes and were conducted and audio-recorded by the same researcher, who had no previous relationship with the participants. Upon completion of the interview, participants were asked to evaluate the schedule and the interview process. The participants' private information was not shared without the individual's knowledge or against their will. Also, at no time were participants identified and they were free to withdraw from the research at any time without penalty. Participants' names were kept anonymous by using code names during interviews and filing of raw data. The selection process of participants was done fairly as each participant fitting the criteria had a chance of being selected. Benefits for participants included being given an opportunity to tell their perspectives in a positive, supportive environment in order to promote AtA in old age.

Table 1

Distribution of the study's participants according to sociodemographic and health-related characteristics.

	Old 75–84 y		Oldest-old ≥ 85 y	
	n	%	n	%
N	76		76	
Age (M; SD)	78.1 (2.196)		89.5 (3.696)	
Sex				
Women	45	59.2	48	63.2
Men	31	40.8	28	36.8
Education				
Primary school	17	22.4	24	31.6
Middle school	25	32.9	30	39.4
High school	27	35.5	16	21.1
University degree or higher	7	9.2	6	7.9
Marital Status				
Married or in a relationship	49	64.5	45	59.2
Widowed	20	26.3	27	35.5
Single	7	9.2	4	5.3
Professional status				
Inactive	41	53.9	47	61.8
Active	35	46.1	29	38.2
Family annual income				
$\leq \text{€}10,000$	15	19.7	26	34.2
$\text{€}10,001\text{--}20,000$	38	50.0	22	28.9
$\text{€}20,001\text{--}37,500$	16	21.1	25	32.9
$\geq \text{€}37,501$	7	9.2	3	3.9
Perceived health				
Good	48	63.2	41	53.9
Poor	28	36.8	35	46.1

M = mean; SD = standard deviation.

2.3. Data analysis

Data was analyzed, employing qualitative content analysis, and using the following procedure: (1) definition of major emergent categories, mutually exclusive, for the pre-existing category (indicators of AtA); (2) creation of a list of coding cues; (3) analysis of verbatim quotes of participants' narratives that better link to emerging categories; (4) identification of subcategories, while preserving the principle of homogeneity of the category; and (5) derivation of emergent categories, through constant comparison within and across interviews allowing for the clustering of related subcategories until the point of theoretical saturation was reached¹².

The approach to the analysis was based on an overarching concern for reflecting the participants' perspectives. To this end, the researchers decided on the word sense as the most appropriate unit of analysis as it would best reflect the participants' language usage and the style variations among the participants. The use of semi-structured interviews allowed the participants to reflect freely on their perceptions. The nominal variables were coded using an alphabetical code. The alphabetical code used the letters A–G, being that each letter corresponded to one category (e.g., "aging in place" = A; "health and body" = D). After categorizing the verbatim quotes of our participants, frequencies for each category were obtained by performing a word-frequency count. Additionally, a literature check warranted that there was a good fit between the reported data and pertinent literature.

An independent analysis of the 152 interviews was performed by a jury of two researchers (both faculty) and our structure of categories was then subjected to an external review. Critical feedback was obtained from two reviewers with experience with older adults. Establishment of the eligibility of the reviewers was ensured by the following criteria: (1) the reviewer had obtained a Masters degree in Health Psychology, which equipped her or him with knowledge in health and well-being matters; (2) the reviewer had investigative skills and health care experience with older adults;

and (3) the reviewer developed experience in mixed research methods. A final group coresolution was made regarding the categories. Reliability between researchers was measured through the Cohen Kappa coefficient. All AtA categories presented a value above 0.80 ($0.852 \leq k \leq 0.912$), indicating a high agreement rate.

The second objective of the study was to analyze the correlational structure of AtA for these two age groups. For this purpose, coding of nominal categories to prepare them for multiple correspondence analysis (MCA) was completed; the associations between the emergent categories and latent constructs that could work as major indicators in older adults' conceptualization of AtA, by MCA were represented; and an analysis of the correlational structure of the three-dimension models for the two age groups was performed. Statistical criteria included a minimum of 5.0% of the total variance explained by each dimension and a minimum eigenvalue of 1 for each dimension.

Data were analyzed using SPSS (version 20.0; SPSS Inc., Chicago, IL, USA). The Ethics Committee of the Research Unit in Psychology and Health (PSY-410), the Portuguese Foundation for Science and Technology (FCT), and ISPA - Instituto Universitário, Lisbon, Portugal approved the study. Informed consent was received from all participants.

3. Results

3.1. Content analysis of the emergent categories

Findings designated a total of seven categories for indicators of AtA (Table 2). The total of subcategories was 29. In detail, we obtained four topics for "aging in place", six topics for "leisure and entertainment", four topics for "existential meaning and spirituality", five topics for "health and body", three topics for "economic situation", four topics for "occupation and achievement", and three topics for "social embeddedness". Overall, "occupation and achievement" was the most verbalized indicator of AtA (15.8%), whereas "leisure and entertainment" was the least referred indicator of AtA (11.7%), as seen in Table 2.

3.2. Aging in place

Older adults verbalized accessibility, need of life simplification, comfort, and safety, as relevant for their AtA.

"I need to have easy access to my house." (Participant 77).

3.3. Leisure and entertainment

"Leisure and entertainment" was the least reported indicator of AtA for the oldest-old participants (11.1%).

"I enjoy my afternoons, playing bridge." (Participant 67).

3.4. Existential meaning and spirituality

"Existential meaning and spirituality" was the most verbalized indicator of AtA for the oldest-old participants (16.9%).

"It is important to me to feel that there is a meaning for my existence in this world." (Participant 39).

3.5. Health and body

Participants indicated their health, physical well-being, and appearance as relevant to their AtA.

"The only thing I need, is to be healthy." (Participant 112).

3.6. Economic situation

Older adults reported a good economic situation and autonomy as an indicator of their AtA.

"I still work for my living and I am proud of it." (Participant 23).

3.7. Occupation and achievement

These participants referred their occupation and future projects contributed to their AtA. This category was the most mentioned indicator of AtA by the old participants (17.7%).

"Being busy keeps me away of getting depressed." (Participant 108).

3.8. Social embeddedness

These participants indicated the importance of being integrated in a significant social network.

"I enjoy being part of my children's lives." (Participant 24).

3.9. MCA of the emergent domains

Representations of the associations between the emergent categories obtained from the narrative analysis, and latent constructs that can work as major determinants in older adults' conceptualization of indicators of AtA, were assessed by a MCA. The contents of MCA findings indicate the potential correlational structure of the precategory in our study and indicate a model with diverse factors and factor loadings.

Results suggest a three-dimension model (accounting for 88.8% of the total variance) composed by: "occupational and social focus", "existential awareness", and "environmental drive", as a best-fit solution for the old participants (Table 3) and a three-dimension model (accounting for 89.3% of the total variance) composed by: "spirituality and health focus", "occupational and social drive", and "environment and leisure focus" as a best-fit solution for the oldest-old participants (Table 4).

Table 2

Emergent categories resulting from content analysis of the precategory "indicators of adjustment to aging".

		Old		Oldest old		Total	
		n	%	n	%	n	%
Indicators of AtA	Aging in place	32	14.1	33	12.6	65	13.3
	Leisure & entertainment	28	12.3	29	11.1	57	11.7
	Existential meaning & spirituality	28	12.3	44	16.9	72	14.8
	Health & body	32	14.1	40	15.3	72	14.8
	Economic situation	35	15.4	36	13.8	71	14.5
	Occupation & achievement	40	17.7	37	14.2	77	15.8
	Social embeddedness	32	14.1	42	16.1	74	15.1
Score of precategory "indicators of AtA"		227	100.0	261	100.0	488	100.0

% = category percentage; AtA = adjustment to aging; n = category frequency.

Table 3

Three-dimensional representation for "indicators of adjustment to aging" for the old participants: factor loadings for each dimension, mean loadings, and % inertia (variance) explained awareness.

Domains	Dimensions			Mean
	Occupational & social focus	Existential awareness	Environment & leisure focus	
Aging in place	0.170	0.284	0.483	0.312
Leisure & entertainment	0.166	0.349	0.429	0.315
Existential meaning & spirituality	0.035	0.567	0.380	0.327
Health & body	0.028	0.607	0.345	0.327
Economic situation	0.817	0.082	0.003	0.301
Occupation & achievement	0.767	0.061	0.020	0.283
Social embeddedness	0.374	0.176	0.074	0.208
Eigenvalue	2.355	2.196	1.734	2.072
Inertia	0.336	0.304	0.248	0.296
% of variance	33.646	30.371	24.774	29.597

Values in bold showed a highloading in the factor, which indicated that these categories are very significant in that factor.

To analyze if sociodemographic variables were related to the indicators of AtA in both groups, Cramers'V, Phi, and Pearson's correlation coefficient were used accordingly. Cramers' V was used for categorical variables, namely, marital status; Phi was employed for sex, professional status, and perceived health, as these are binary categorical variables; Spearman's correlation coefficient was used for education and income; and Pearson's correlation coefficient was used for age, because it is a quantitative continuous variable. No relationships were found between education, sex, perceived health, and age, and any of the indicators of AtA. However, for the old, significant moderate relations were found between income and economic situation ($r = 0.412$; $p < 0.001$), and between professional status and occupation and achievement ($\Phi = 0.434$; $p = 0.019$). For the oldest-old, a significant moderate association was only found between marital status and social embeddedness ($V = 0.312$; $p < 0.001$). Simple linear regression results indicated that for the old, income significantly predicted the economic situation ($R^2 = 0.421$, $F_{(1)} = 12.642$, $p < 0.001$) and professional status significantly predicted occupation and achievement ($R^2 = 0.473$, $F_{(1)} = 15.281$, $p < 0.001$). For the oldest-old, marital status significantly predicted social embeddedness ($R^2 = 0.301$, $F_{(1)} = 11.447$, $p < 0.001$).

4. Discussion

With this study, we aimed to explore the conceptualization of AtA and to examine the potential explanatory mechanisms of a model for AtA for the old and the oldest-old.

"Occupation and achievement" and "social embeddedness" were the most frequent indicator of AtA in this study. These results are in line with previous research¹³.

The MCA emphasizes that AtA is explained by a specific three-factor model, for each group of participants.

For the old participants, the largest factor "occupational and social focus" accounted for 33.6% of total variance, whereas for the

oldest-old participants, "spirituality and health focus" represented 33.5% of total variance. For the old participants, the first factor ("occupational and social focus") assembled "economic situation", "occupation and achievement", and "social embeddedness". Literature highlights productive activities¹⁴, as well as income, as contributing to the well-being of older adults¹⁵.

"Existential meaning and spirituality" and "health and body", constituted the second factor ("existential awareness"). Growing literature highlighted the holistic nature of older adults' spirituality¹⁶. Moreover, perceived health has been repeatedly pointed out as a predictor of older adults' well-being¹⁷. In addition, it must be noted that health-related declines may also represent a potential disruption to social support¹⁸.

The third factor ("environment and leisure focus") assembled "aging in place" and "leisure and entertainment". These results are in line with recent research, which focused on the role of environmental and lifestyle characteristics⁸.

For the oldest-old participants, "existential meaning and spirituality", "health and body", and "economic situation", constituted the first factor ("spirituality and health focus"). Previous literature highlights further existential development when the life cycle is nearly complete. Participation in spiritual activities might offer social support in spiritual settings and an available interpretation of the meaning of life events¹⁹. Indeed, feeling significant and attributing existential meaning to events are associated with well-being¹⁹. Additionally, there is a growing consensus that health is a critical antecedent of well-being and quality of life in extreme old age¹⁷.

The second factor ("occupational and social drive") gathered "occupation and achievement" and "social embeddedness". These outcomes emphasize the influence of significant relationships for old adults¹⁵. Furthermore, literature points out that productive activities contribute to well-being of older adults¹⁴.

Similarly to the old adults, the third factor ("environment and leisure focus") comprised "aging in place" and "leisure and

Table 4

Two-dimensional representation for "indicators of adjustment to aging" for the oldest old participants: factor loadings for each dimension, mean loadings, and % inertia (variance) explained.

Domains	Dimensions			Mean
	Spirituality & health focus	Occupational & social drive	Environment & leisure focus	
Aging in place	0.124	0.312	0.500	0.312
Leisure & entertainment	0.119	0.378	0.450	0.315
Existential meaning & spirituality	0.845	0.055	0.004	0.301
Health & body	0.816	0.037	0.013	0.289
Economic situation	0.403	0.133	0.065	0.201
Occupation & achievement	0.018	0.638	0.344	0.333
Social embeddedness	0.018	0.638	0.344	0.333
Eigenvalue	2.343	2.190	1.720	2.084
Inertia	0.335	0.313	0.246	0.298
% of variance	33.467	31.290	24.570	29.775

Values in bold showed a highloading in the factor, which indicated that these categories are very significant in that factor.

entertainment". Research has shown that happiness increases when older adults combine effortful social, physical, cognitive, and household activities with restful activities¹⁴. Considering that older adults live within a relatively steady social network, which provides regular contact over time, environmental, and lifestyle characteristics partly enable social engagement¹⁹.

Furthermore, for the old, income showed a significant impact in the economic situation and professional status in occupation and achievement. For the oldest-old, marital status displayed a significant effect in social embeddedness. These outcomes corroborate previous research^{3,13–15}.

Several limitations of this study merit discussion. The use of a purposeful sampling method could have resulted in some selection bias. Older adults with active professional status were over-represented, which might have influenced the results. Therefore, the sample is not representative and cannot lead to generalizations to the entire older population.

The descriptive and correlational nature of the research did not encompass the study of the mutual influence among indicators of AtA. We expect "health and body" and "economic situation" to influence "aging in place" and "leisure and entertainment", and "occupation and achievement" to affect social embeddedness. Hence, these variables need to be further deepened, as they could be instrumentally conjoint mediators when assessing AtA. Longitudinal and sequential designs are further needed to explain the stability of the found indicators of AtA.

Notwithstanding these limitations, the present study represents an important empirical step in understanding the diversity of perspectives concerning AtA among older adults.

Firstly, the data came from a varied sample of older population. Secondly, the study showed a distinct correlational structure and a three-factor model for the old and the oldest-old participants, which helped to uncover the different perspectives of both groups concerning AtA. In brief, the old participants were mostly centered on their economic situation, occupation, and social support, whereas the oldest-old participants were mostly driven by an existential meaning and their spiritual beliefs, as well as focusing on health factors and economic situation.

In conclusion, this study stresses the need to distinguish different perspectives of the AtA in two phases of late adulthood. It is paramount to consider these distinct perspectives for implementing effective intervention programs for aging well in old age.

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